

REMARKS

Drawings (Paragraph 3 of Office Action)

The Examiner indicates in paragraph 3 of the Office Action that Applicant should comply with the objections to the drawings as set forth in Form-948 mailed with the Office Action. On January 29, 2003, staff of the undersigned contacted the Examiner and was informed that Form 948 was not included with the Office Action and that the drawings are accepted. On the afternoon of January 29, 2003, the undersigned contacted the Examiner to directly confirm that drawing corrections are not required. The Examiner confirmed that Form 948 was not included since the drawings are accepted.

Information Disclosure Statement (Paragraph 4 of Office Action)

Attached is a PTO form 1449 again listing the Bose reference. The attached PTO form 1449 corrects a typographical error in the spelling of Bose's name. The correct spelling is "Bose" rather than "Boset".

Specification Informalities (Paragraph 7 of Office Action)

The first line on page 20 of the specification is amended to recite the phrase "We claim" as required by the Examiner.

Rejection of Claims 4-6 Under 35 U.S.C. 112, First Paragraph
(Paragraph 7 of Office Action)

Claims 4-6 are rejected by the Examiner under 35 U.S.C. 112, first paragraph, for the reasons set forth in paragraph 7 of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Examiner indicates that claims 4-6 are enabled for "an isolated recombinant protein".

Accordingly, claims 4-6 are amended in the manner suggested by the Examiner. Therefore, reconsideration and withdrawal of the rejection of claims 4-6 under 35 U.S.C. 112, first paragraph, are requested.

Rejection of Claim 6 Under 35 U.S.C. 112, Second Paragraph
(Paragraphs 8-9 of Office Action)

Claim 6 is rejected by the Examiner under 35 U.S.C. 112, second paragraph, for the reasons set forth in paragraph 9 of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Examiner indicates that claim 6 is vague in reciting "from a host transformed with a DNA vector--."

Claim 6 is amended to address the matters raised by the Examiner. Accordingly, reconsideration and withdrawal of the rejection of claim 6 under 35 U.S.C. 112, second paragraph, are respectfully requested.

Rejection of Claims 4, 5 and 11 Under 35 U.S.C. 102(b) Over Bose
(Paragraphs 10-11 of Office Action)

Claims 4, 5 and 11 are rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Bose et al. for the reasons set forth in paragraph 11 of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Applicants note that claim 6 is free of this rejection. The Examiner should note that the subject matter of claim 6 is incorporated into claim 4. Thus, the rejection is moot and should be withdrawn.

The Examiner should further note that claim 4 has been amended to include the following limitation: "cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2 with one to several amino acid residues therein being deleted, substituted or added, is incorporated into the DNA vector."

Rejection of Claims 4-6 and 11 Under 35 U.S.C. 102(a) Over Ikadi
et al (Paragraph 13 of Office Action)

Claims 4-5 and 11 are rejected by the Examiner under 35 U.S.C 102(a) as being anticipated by Ikadai et al. (Accession No: ABO 17700 or Abstract of 126th conference on Japanese Society of Veterinary Science) for the reasons set forth in paragraph 13

of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Examiner's attention is directed to the attached Rule 132 Declaration. As set forth in the Declaration, both of the cited references to Ikadai et al. disclose work by the present inventors and list additional authors. However, the additional authors are not inventors of the present invention. All the information and data in the cited references were prepared under the supervision and control of the present inventors and not by the additionally named authors.

Accordingly, with respect to the Abstract of 126th conference on Japanese Society of Veterinary Science, the additional authors are non-inventors (Xuan X. and Avarzed A.) Similarly, with respect to Accession No.: ABO 17700, the additional authors are non-inventors (Xuan Z., Tanaka T., Abgaandorjiin A., Inoue N. and Toyoda Y.).

In conclusion, neither of the cited Ikadi et al. references (1998 Accession No.: ABO 17700 or Abstract of 126th conference on Japanese Society of Veterinary Science) are "by another". The information and invention disclosed therein represents the invention of the presently named inventors. All of the other authors are non-inventors.

Accordingly, Applicants have shown that the Ikadai et al. references are not prior art. Rather, the cited references are

the work of the present inventors. Thus, the rejection of claims 4-6 and 11 under 35 U.S.C 102(a) as being anticipated by Ikadai et al. (Accession No: ABO 17700 or Abstract of 126th conference on Japanese Society of Veterinary Science) should be withdrawn by the Examiner.

Rejection of Claims 4-6 and 11 Under 35 U.S.C. 102(a) Over Kappmeyer et al. (Paragraph 12 of Office Action)

Claims 4-6 and 11 are rejected by the Examiner under 35 U.S.C. 102(a) over Kappmeyer et al. for the reasons set forth in paragraph 12 of the Office Action. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

The Examiner's attention is directed to the Ikadai et al. references cited in paragraph 13 of the Office Action and to the Rule 132 Declaration discussed above. Both of the Ikadai et al. references are the work of the present inventors. Accession No: ABO 17700 states that the sequence was submitted on September 16, 1998. A copy of Accession No: ABO17700 is attached. Applicants submit that they have provided sufficient evidence to support a date of invention as of September 16, 1998.

The Kappmeyer et al. reference is prior art as of July 1999. Accordingly, the rejection of claims 4-6 and 11 under 35 U.S.C. 102(a) over Kappmeyer et al. for the reasons set forth in

paragraph 12 of the Office Action should be withdrawn since the cited reference has been antedated by Applicants.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a three month extension of time for filing a reply in connection with the present application, and the required fee of \$930.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The first line on page 20 has been amended as follows:

"CLAIMS" to -- WE CLAIM --

IN THE CLAIMS

The claims have been amended as follows:

Claim 4 (Amended) [A] An isolated recombinant protein from merozoite of *Babesia caballi*, wherein said protein is expressed in a host cell transformed with a DNA vector into which cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2, or cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2 with one to several amino acid residues therein being deleted, substituted or added, is incorporated into the DNA vector.

Claim 5 (Amended) The isolated recombinant protein of claim 4, wherein said protein [has the amino acid sequence shown in SEQ ID NO: 2, or has the amino acid sequence shown in SEQ ID NO: 2 with one to several amino acid residues therein being deleted, substituted or added and] is immunologically reactive with an antibody or antiserum elicited by a 48kDa protein of rhoptry of *Babesia caballi* merozoite.

Claim 6 (Amended) The isolated recombinant protein of claim 4, [or 5] wherein said protein is expressed [from] in a host cell transformed with a DNA vector into which cDNA having the nucleotide sequence encoding the amino acid sequence as shown in SEQ ID NO: 2 is incorporated.